ABSTRACT

A technique of the present invention utilizes qualification characteristics from a single wafer for qualifying a semiconductor manufacturing tool. Generally speaking, the technique commences with the processing of a wafer by the manufacturing tool. During processing, one or more qualification characteristics required to properly qualify the tool are measured using an in situ sensor or metrology device. Subsequently, the manufacturing tool is qualified by adjusting one or more parameters of a recipe in accordance with the qualification characteristics measured from the wafer to target one or more manufacturing tool specifications. In some embodiments, the tool to be qualified includes a bulk removal polishing platen, a copper clearing platen and a barrier removal polishing platen. In these cases, the technique involves transferring a wafer to each of the bulk removal polishing platen, copper clearing platen and barrier removal polishing platen, where qualification characteristics are measured from the wafer during processing. These platens are subsequently qualified by adjusting one or more parameters of a recipe associated with each platen in accordance with the qualification characteristics measured from the wafer, to target one or more platen specifications.